antigens and Her-2/neu, but did not express MHC class II antigens, CA-125, ICAM-1, or IL-4 receptors. Expression of surface antigens was also determined at 2 or 8 days after irradiation. MHC class I antigen and Her-2/new antigen expression increased significantly at all radiation doses, and tended towards higher expression at higher doses. Irradiation did not induce expression of HLA class II antigens, ICAM-I, or CA-125.--

IN THE CLAIMS

Cancel original claims 1-30 without prejudice. Add new claims 31-62.

A7

31. A composition comprising a cell genetically altered to express a cytokine stably associated in the cell outer membrane, or the progeny of such a cell, which upon administration to a subject is effective in treating a neoplastic disease or eliciting an anti-tumor immunological response in the subject.

32. The composition of claim 31, wherein the cytokine is selected from the group consisting of IL-4, GM-CSF, IL-2, TNF-α, and M-CSF.

33. The composition of claim 31, wherein the cell is a cancer cell.

34. The composition of claim 31, wherein the cell is from a cancer of the same tissue type as a tumor in the subject.

35. The composition of claim 33, wherein the cancer is an ovarian cancer or a brain cancer.

36. The composition of claim 31, wherein the cell is allogeneic to the subject.

37. The composition of claim 31, wherein the cell is histocompatibly identical to the subject.

A7 cont.

38. The composition of claim 31, further comprising a tumor-associated antigen, wherein the combination of the cytokine and the tumor-associated antigen in the composition is effective in treating a neoplastic disease or eliciting an anti-tumor immunological response in the subject.

B8

39. The composition of claim 38, wherein the tumor-associated antigen is obtained from a cell autologous to the subject.

40. The composition of claim 38, wherein the tumor-associated antigen is expressed by the same cells expressing the membrane-associated cytokine.

41. The composition of claim 38, comprising a combination of:

a) the cell expressing the membrane-associated cytokine; and

b) a tumor cell autologous to the subject;

wherein the combination is effective in treating a neoplastic disease or eliciting an anti-tumor immunological response in the subject.

B3

42. The composition of claim 41, wherein the tumor cell is a primary tumor cell dispersed from a solid tumor obtained from the subject.

43. The composition of claim 41, wherein the tumor cell is a glioma, a glioblastoma, a gliosarcoma, an astrocytoma, or an ovarian cancer cell.

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44. The composition of claim 41, wherein the tumor cell is inactivated.

45. The composition of claim 41, wherein the cell expressing the membrane-associated cytokine is inactivated.

46. The composition of claim 41, wherein the cell produces a secreted cytokine in addition to the cytokine stably associated in the outer membrane.

A7 cont.

47. The composition of claim 41, wherein a majority of the cytokine produced by the cell is present on the outer membrane of the cell.

48. The composition of claim 41, wherein the cytokine is selected from the group consisting of IL-4, GM-CSF, IL-2, TNF-α, and M-CSF.

49. A composition comprising a tumor associated antigen and a population of cells expressing a transmembrane cytokine at a level sufficient to stimulate an immune response to the tumor associated antigen.

50. A unit dose of the composition according to claim 31, wherein the number of cells is at least about 5×10^6 but not more than about 2×10^8.

51. The composition of claim 31, wherein the cell is a human cell.

52. The composition of claim 31, wherein the cytokine naturally occurs as a membrane cytokine.

53. The composition of claim 31, wherein the cytokine is a fusion protein comprising a heterologous transmembrane region.

54. The composition of claim 31, wherein the cell has been transduced with a retroviral expression vector, or is the progeny of such a cell.

55. A method for producing the composition of claim 31, comprising transducing the cell with an expression vector encoding the membrane-associated cytokine.

56. The method of claim 55, wherein the expression vector is a retroviral vector.

57. The method of claim 55, wherein the cytokine is selected from the group consisting of IL-4, GM-CSF, IL-2, TNF-α, and M-CSF.

A7 cont.

58. The method of claim 55, wherein the cell is from a cancer of the same tissue type as a tumor in the subject.

59. The method of claim 55, wherein the cell is allogeneic to the subject.

60. The method of claim 55, wherein the cell is histocompatibly identical to the subject.

61. The method of claim 55, wherein the cytokine is expressed under control of a heterologous promoter.

62. A method for producing the composition of claim 38, comprising transducing a cell with an expression vector encoding the membrane-associated cytokine, and providing the transduced cell in combination with the tumor-associated antigen.